Flight Standards Directorate

Practical guide

Assigning pilots to oversight tasks

Working Group established following WP15
of EASA Management Board meeting 2016-02

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An EASA Guide with the contribution of:

1.	CAA Belgium	6.	CAA Poland
2.	CAA Denmark	7.	CAA Spain
3.	CAA Finland (TRAFI)	8.	CAA Switzerland
4.	CAA Germany (LBA)	9.	CAA UK
5.	CAA Netherlands		

Contents

1 Executive summary

This practical guide (hereinafter referred to as the 'Guide') identifies four practical steps for competent authorities when developing procedures for oversight and approval tasks that require pilot competence. This Guide builds on the much wider framework of the EASA Aviation Inspector Competencies Report[1] and touches upon those elements that require 'technical expertise' of the inspector for certain specific tasks.

Step #1 The task analysis according to the applicable implementing rules (IRs), acceptable means of compliance (AMCs) and guidance material (GM) defines **when pilot competence is needed** for approval and oversight activities to be performed by a national aviation authority (NAA). A limited number of tasks require the competence of a qualified pilot[2]. The Guide provides for a common understanding of the task analysis and explains how to relate it to the applicable IRs, AMCs and GM, and to the ICAO Doc 8335[3] 'Manual of Procedures for Operations Inspection, Certification and Continued Surveillance'. This step aims to facilitate demonstration of compliance.

Step #2 Whenever specific pilot competence is required, the NAA will have to identify a qualified inspector pilot. To facilitate this step, the Guide provides a description of **aircraft clustering**. This should enable the NAAs to assign qualified pilots to a range of aircraft operations in a standardised manner. Aircraft clustering will ensure maximum flexibility by grouping aircraft of similar characteristics so that a single inspector can perform oversight tasks for all aircraft in the same cluster.

Step #3 If the clustering of aircraft does not help to identify the appropriately qualified inspector pilot, the next step is to consider the appropriate **team composition**. This means that the NAA might designate a competent pilot, who is not necessarily a qualified inspector, to support an inspection task. For example, a senior examiner may act as subject-matter expert reporting to the inspector who is responsible for the oversight. Team composition refers either to a single team conducting an on-site inspection or to a team whose subject-matter expert (the qualified pilot, in this case) will perform the technical tasks on-site and report to the NAA inspector in charge who will then review the documents off-site and determine a course of action in relation to the oversight. This will allow the NAA to adapt the team size to the organisation size for the on-site inspection.

Step #4 If all the above does not help to identify the appropriately qualified pilot, the Guide provides advice on the use of **pool of experts** and the issues related to the management of resources.

2 Introduction

Current authority requirements related to the qualifications and training of inspectors of competent authorities (ARA.GEN.200 and ARO.GEN.200) require inspectors to be 'qualified to perform their allocated tasks and have the necessary knowledge, experience, initial and recurrent training to ensure continuing competence'.

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[1] For the full report, see: http://www.easa.europa.eu/document-library/general-publications/easa-aviation-inspector-competencies-report.

[2] Tasks requiring qualified inspectors for air operations are contained in ED Decision 2017/006/R 'AMC and GM to Part-ARO — Issue 3, Amendment 6', available at https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2017006r.

[3] https://www.icao.int/APAC/Meetings/2012_FAOSD_Training/Doc 8335 - Manual for Ops Inspection Cert Continued Surv Ed 5_(En)[1].pdf

It is essential that the competent authority have the full capability to adequately monitor the continued compliance of an organisation by ensuring that the whole range of its activities is assessed by appropriately qualified personnel. Therefore, for **each inspector**, the competent authority should:

(1)   define the **competencies** required to perform the allocated certification and oversight tasks;

(2)   define the associated **minimum qualification** requirements;

(3)   establish initial and recurrent **training programmes** in order to maintain and enhance inspector competence at the level necessary to perform their allocated tasks; and

(4)   ensure that the **training** provided meets the established standards, and that the training provided is regularly reviewed and updated whenever necessary.

In the area of Air Operations, new AMCs/GM on inspector qualifications have been published with Decision 2017/006/R. In the area of Aircrew, the European Aviation Safety Agency (EASA) has launched a rulemaking task to develop new AMCs/GM to further specify the qualifications needed for certain tasks in the aircrew domain.

This Guide contains several annexes providing the reader with practical information on:

—   the definitions used;

—   clustering of pilot competence;

—   team composition, roles and responsibilities;

—   examples of methods of requests for support;

—   selection of pilots from a pool of experts to act as subject-matter experts;

—   an example template for contractual aspects of a pool of experts agreement.

2.1   General considerations

In addition to being aligned with Regulation (EC) No 216/2008[1] and its IRs, this Guide is consistent with paragraph 6.2.1 of ICAO Doc 8335 on the qualifications of inspectors, essentially recognising that:

—   an inspector should be qualified for the type of aircraft concerned or for a type of aircraft with similar operational characteristics;

—   it is not expected that, in all cases, the inspector possesses the same level of flying experience in the aircraft type as the personnel being inspected do or, in the case of operator fleets with multiple aircraft types, that the inspector is qualified for all aircraft types;

—   it cannot be expected that an inspector possesses actual flying experience in all the routes for which inspections are conducted, as long as they are at least experienced in comparable routes and are adequately briefed on the particular route being inspected.

This Guide aims to establish common ground for the consistent implementation of Regulation (EC) No 216/2008 and its IRs. It is drafted assuming that safety management principles are consistently applied to manage all oversight processes. In particular, it is expected that this Guide is interpreted having in mind, at least, the following requirements:

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[1]   Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1) (http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1474978980580&uri=CELEX:32008R0216).

— ARx.GEN.200(a)(4)[1] requires that a safety risk management process be established and maintained as part of the management system of the competent authority;

— ARx.GEN.300(c) requires that the scope of oversight be determined based on safety priorities;

— ARx.GEN.305(b) requires that the oversight programme be developed based on the assessment of risks;

— ARx.GEN.305(c) provides for the oversight planning cycle to be adjusted according to the safety performance of an organisation.

Typically, this means that even though this Guide suggests ways to identify when a pilot's competence can be applied to a larger range of classes or types of aircraft than the type or class for which they are qualified, this does not mean that all oversight tasks assigned to such pilots will be performed with the same efficiency. Obviously, an inspector pilot is more effective in performing oversight tasks when such tasks are within the scope of:

— the type or class of aircraft for which the inspector pilot holds the related ratings;

— the operational environment the inspector pilot is most familiar with; and

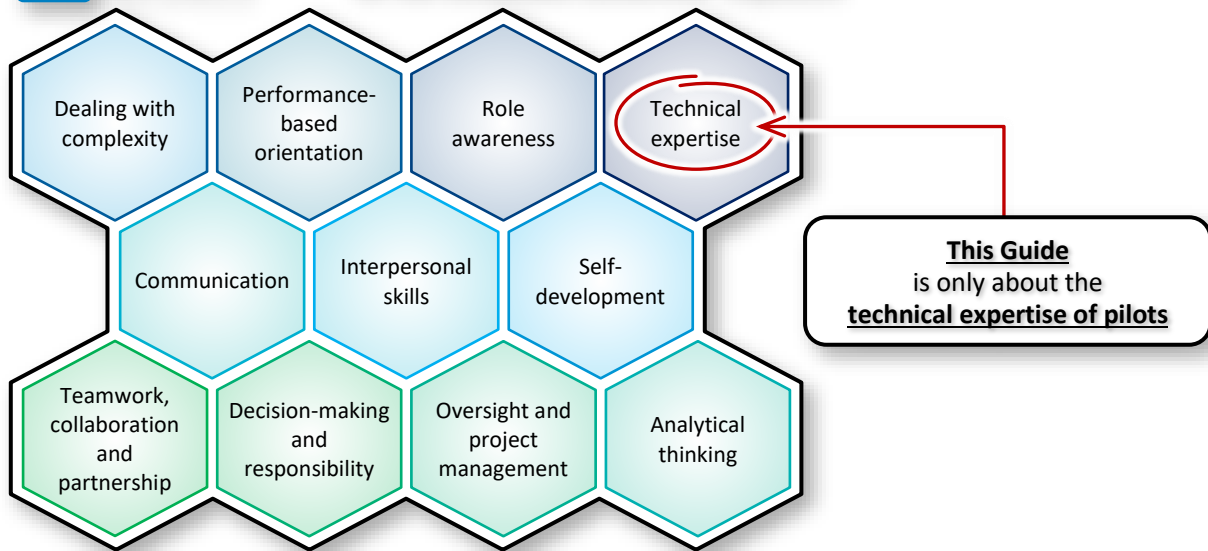— the technical specificities in which the inspector pilot has gathered the highest level of experience.

Efficient oversight depends, among other things, on the inspector's broad understanding of the technical fields related to the oversight tasks to be performed. However, in some cases, oversight requires in-depth knowledge of a specific area of expertise[2].

The suggestions made in this Guide should be interpreted and implemented only to the extent that they provide for sound and effective oversight and safety risk management.

As explained above, this Guide builds on the 'Competency Framework for the Competent Authorities' Inspectors' proposed by EASA. It addresses only a small part of the technical expertise described in the Competency Framework, i.e. specifically the qualification of pilots performing approval and oversight tasks. Although outside the scope of this Guide, all the competencies identified in the Competency Framework should serve as a basis for the assessment of the ability of an inspector to perform oversight tasks. This also applies to pilots acting as inspectors or subject-matter experts.

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[1] When the letter 'x' is used in a reference, it replaces either A or O. Such a reference is provided in a generic format. In this case, AR**x**.GEN.200 refers either to AR**A**.GEN.200 of Regulation (EU) No **1178/2011** (the Aircrew Regulation) or to AR**O**.GEN.200 of Regulation (EU) No **965/2012** (the Air Operations Regulation). Generic references are meant to include any other similar requirement related to safety management, as applicable, under Regulation (EC) No 216/2008 and its IRs. Although some are indicated in this Guide, not all of them are included. In this regard, it is expected that the compliance monitoring function, as required by ARx.GEN.200(a)(4), ensures that a competent authority implements and continuously adheres to all applicable requirements.

[2] See first row ('TECHNICAL EXPERTISE') of the 'Table of competencies' of Section 4.2 of the 'Proposal for a Competency Framework for the Competent Authorities' Inspectors' (https://www.easa.europa.eu/system/files/dfu/EASA%20Aviation%20Inspector%20Competencies%20Report.pdf).

**Proposal for a Competency Framework
for the Competent Authorities' Inspectors**

2.2 Flight Ops inspectors

Following feedback from standardisation inspections and specific concerns raised regarding Flight Ops inspector qualifications, EASA developed a regulatory proposal which was finalised in 2017 and led to the adoption of new AMCs/GM to ARO.GEN.200 on inspector qualifications in the area of Air Operations.

The revised AMCs/GM published with Decision 2017/006/R include a set of specific inspector qualifications only for the following specific tasks related to:

(1)   flight crew operating procedures contained in Part B (e.g. Chapters B-2, B-3, B-9) of the operations manual (OM) (i.e. normal, abnormal and emergency procedures, and minimum equipment list (MEL));

(2)   the aircraft/flight simulation training device (FSTD) part of the flight crew training syllabi and checking programmes contained in Part D of the OM.

For those specific tasks, the inspector performing oversight related to Air Operations should possess all of the following qualifications:

(1)   operational experience in air transport operations appropriate to the allocated tasks;

(2)   experience in either operational management within an air transport operation, or as an examiner, or as an instructor; **and**

(3)   **hold or have held** a valid type rating on the aircraft type concerned, or a class rating as appropriate, or a rating on aircraft types/classes with similar technical and operational characteristics.

Additional GM clarifies how to establish **similar technical and operational characteristics**.

The AMCs/GM ensure a certain degree of **flexibility** in terms of required technical background and knowledge, depending on the type of operations.

2.3   Aircrew inspectors

For aircrew inspectors, RMT.0587 'Regular update of Regulations (EU) Nos 1178/2011 and 965/2012 regarding pilot training and licensing and the related oversight'[1] addresses the need to better clarify aircrew inspector qualification requirements. The proposal has been developed by EASA with the support of stakeholders (industry and Member States' representatives), and was published on 30 November 2016 on the EASA website for consultation (see NPA 2016-16 'Regular update of Part-FCL — Regular update of Regulation (EU) No 1178/2011 regarding pilot training and licensing and the related oversight'[2]).

The revised proposal includes:

— AMC2 ARA.GEN.200(a)(2): additional qualification and training elements for inspectors have been added (due to the large amount of new text, the whole AMC has been replaced);

— GM2 ARA.GEN.200(a)(2) has been added to include the list of documents which may be used for the content of the initial training programme for inspectors referred to in (b)(3) and (b)(6) of AMC2 ARA.GEN.200(a)(2);

— GM3 ARA.GEN.200(a)(2) has been added to clarify the content of 'relevant ratings and certificates appropriate to the level of the training conducted in the ATO'.

The qualification elements, proposed with NPA 2016-16, clarify when the aircrew inspector is required to hold or have held a licence, a valid class or type rating for the aircraft used for training, and when it is sufficient to have a similar aviation background.

3   Basic principle that applies to this Guide

An inspector should, by their qualification and competence, **command the professional respect of the inspected personnel**. In addition, the wider framework of the EASA Aviation Inspector Competencies Report[3] provides the overall perspective and relates not only to technical expertise, but also to other competencies needed.

The inspector should be at least as competent as the personnel to be inspected or assessed[4]. The competence of an inspector for certain specific tasks is to be assessed on the basis of:

a.   the type of licence held;

b.   qualifications and ratings (e.g. type rating, but also other ratings such as instrument rating, mountain rating, or night rating);

c.   certificates (such as instructor or examiner certificate);

d.   the experience in exercising privileges that should be identical or similar to the privileges of the person to be assessed, inspected or supervised;

e.   the relevance of that experience to the task to be performed, including recency.

The need for the inspector to hold or have held the very same type rating held by the personnel to be inspected may be of little importance when the inspector has limited experience in exercising the privileges

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1   https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0587

2   https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2016-16

3   For the full list of competencies, see pp. 11–14 of the EASA Aviation Inspector Competencies Report, available at http://www.easa.europa.eu/document-library/general-publications/easa-aviation-inspector-competencies-report.

4   'Assessed' in the sense of an instructor assessment of competence under FCL.935, or for an examiner assessment of competence under FCL.1020, for example.

associated with that specific rating. Another inspector with considerable experience as a pilot, instructor or examiner in an aircraft type similar to the one that is involved in the activity to be inspected would be more suitable. In this case the differences between the aircraft types are of less importance. The following table illustrates the concept described above:

	Criteria *See above*	**Matching inspector competence with task needs**	
		Inspector 1	Inspector 2
Personnel to be inspected or ideal inspector profile for the inspection task	a	100 %	100 %
	b	*(Similar type rating)* 75 %	*(Same type rating)* 100 %
	c	100 %	100 %
	d	*(Great experience in similar type)* 120 %	*(Limited experience in same type)* 25 %
	e	80 %	100 %
Matching score[1]		94 %	76 %

The table above can be summarised in the following spider diagrams:

Inspector-competence matching

Ideal inspector profile 100 %

Inspector 1 94 % **Best match**

Inspector 2 76 %

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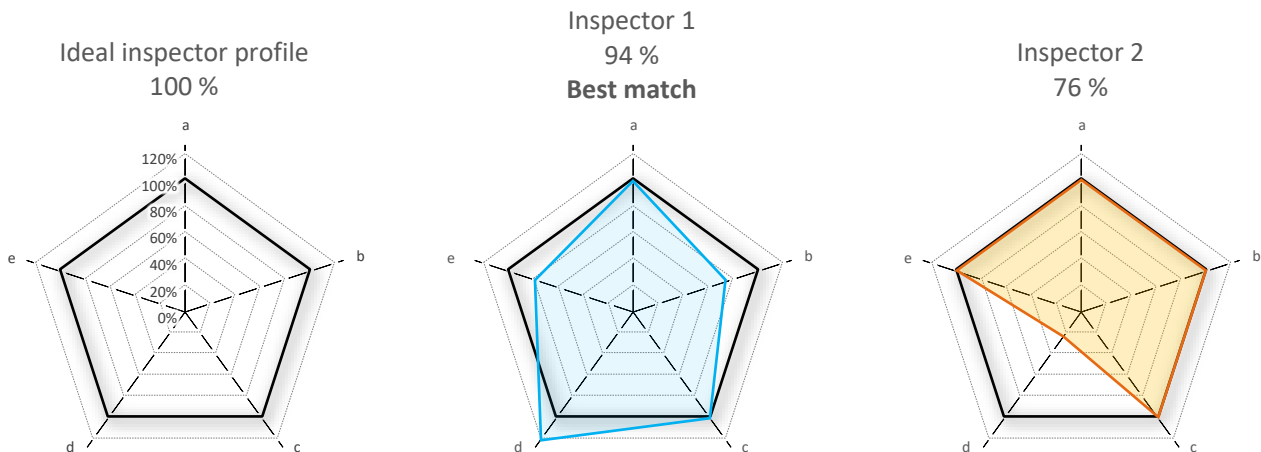
[1]   In this example, the final score is the geometric mean of all other scores.

4   Practical steps

The following steps should be considered whenever a suitably qualified inspector pilot is required:

1. Assess the competence needed for the specific tasks that have been identified.

2. Identify a qualified pilot with the appropriate competence.

3. Assign role to qualified pilot as a team member or as inspector responsible for the whole oversight tasks.

4a   Identify qualified pilot from a pool of experts that can be easily contracted.

4b   Manage availability of pilots in a pool of experts from other NAAs or industry, or both.

4.1   Assess pilot competence that is needed for a specific inspection task

The following processes should be considered to review the tasks that an inspector may be assigned to:

OPS Regulation (EU) No 965/2012	— AOC approval/oversight
Aircrew Regulation (EU) No 1178/2011	— ATO approval/oversight — Examiner standardisation (FCL.1015) — Examiners assessment of competence (FCL.1020)

The specific tasks, where pilot competence is needed, are identified in the following AMCs/GM.

AIRCREW

Tasks (review when instructor or examiner privilege is needed) — Regular update of Part-FCL (NPA 2016-16[12])

Activity	AMC	GM
ATO approval: — training manual (flight instruction as applicable) — training courses (flight instruction as applicable) — (…) ATO: — training courses ((flight instruction as applicable) — (…)	**AMC2 ARA.GEN.200(a)(2) Management system** QUALIFICATION AND TRAINING — INSPECTORS **(a) Qualification** **(…)** **Additional qualification criteria:** (1) inspectors conducting sampling of training flights in aircraft or FSTD sessions should hold or have held a pilot licence and relevant ratings and certificates <u>appropriate to the level of the training</u> conducted in the ATO	**GM3 ARA.GEN.200(a)(2) Management system** The meaning of 'relevant ratings and certificates appropriate to the level of the training conducted in the ATO', as used in AMC2 ARA.GEN.200(a)(2), is explained below: — the range of activities in an ATO may vary from instructions for the simple single-engine aircraft to type training for CS-25-certified multi-pilot aircraft; — in the context of the general approval of the ATO, experience in similar types or classes of aircraft is acceptable; — the inspector has the instructional experience in the same or similar types or the same class of aircraft intended to be flown within the ATO (e.g. type rating to assess type training programmes); and — the experience in large CS-25 aircraft will not, for example, equip the inspector to assess the training programme in an ATO operating only SEP (land) aircraft; similarly, experience as a PPL instructor will not necessarily equip the inspector to assess a type training course for a CS-25 aircraft; in both cases, additional appropriate training in the applicable environment is necessary.
Skill tests as examiner (LPC) Examiners standardisation Examiners assessment of competence Instructors assessment of competence ATO approval: — training courses (as applicable)	**AMC2 ARA.GEN.200(a)(2) Management system** QUALIFICATION AND TRAINING — INSPECTORS (a) Qualification (…) Additional qualification criteria: (2) inspectors conducting sampling of training flights in aircraft as a member of the flight crew should hold a pilot's licence and relevant ratings and certificates <u>appropriate to the level of the training</u> conducted.	

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[12]   https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2016-16

AIRCREW

Tasks (review when instructor or examiner privilege is needed) — Regular update of Part-FCL (NPA 2016-16[12])

Activity	AMC	GM
— Examiners standardisation course — All instructors courses — (…) ATO oversight: (…)		
	AMC2 ARA.GEN.200(a)(2) Management system QUALIFICATION AND TRAINING — INSPECTORS **(a) Qualification** **(…)** **Additional qualification criteria:** (3) inspectors conducting sampling of theoretical-knowledge instruction should have a practical background in aviation in the areas relevant to the training provided and have undergone a training course in instructional techniques.	
FSTD initial and recurrent evaluation	Under development	
FSTD 'user approval' ATO approval: — operations manual (see OPS)		**GM3 ARA.GEN.200(a)(2) Management system** The meaning of 'relevant ratings and certificates appropriate to the level of the training conducted in the ATO', as used in AMC2 ARA.GEN.200(a)(2), is explained below:

AIRCREW
Tasks (review when instructor or examiner privilege is needed) — Regular update of Part-FCL (NPA 2016-16[12])

Activity	AMC	GM
— (…) ATO oversight: (…)		— the range of activities in an ATO may vary from instructions for the simple single-engine aircraft to type training for CS-25-certified multi-pilot aircraft; — in the context of the general approval of the ATO, experience in similar types or classes of aircraft is acceptable; — the inspector has the instructional experience in the same or similar types or the same class of aircraft intended to be flown within the ATO (e.g. type rating to assess type training programmes); and — the experience in large CS-25 aircraft will not, for example, equip the inspector to assess the training programme in an ATO operating only SEP (land) aircraft; similarly, experience as a PPL instructor will not necessarily equip the inspector to assess a type training course for a CS-25 aircraft; in both cases, additional appropriate training in the applicable environment is necessary.

AIR OPS
ED Decision 2017/006/R of 30 March 2017

AOC approval & oversight (including flight crew training approval and oversight, and FSTD user approval)

AMC	GM

AMC1 ARO.GEN.200(a)(2)   Management system

QUALIFICATION AND TRAINING — GENERAL

(a)   It is essential that the competent authority has the full capability to adequately assess the continued competence of an organisation by ensuring that the whole range of activities is assessed by appropriately qualified personnel.

(b)   For each inspector, the competent authority should:

(1)   define the competencies required to perform the allocated certification and oversight tasks;

(2)   define the associated minimum qualification requirements;

(3)   establish initial and recurrent training programmes in order to maintain and to enhance inspector competency at the level necessary to perform the allocated tasks; and

(4)   ensure that the training provided meets the established standards and is regularly reviewed and updated whenever necessary.

GM2 ARO.GEN.200(a)(2) Management system

INSPECTOR COMPETENCY

(a)   The Competency is a combination of individual skills, practical and theoretical knowledge, attitude, training, and experience.

(b)   An inspector should, by his/her qualifications and competencies, command the professional respect of the inspected personnel.

GM3 ARO.GEN.200(a)(2)   Management system

SPECIFIC FLIGHT OPERATIONS INSPECTOR QUALIFICATION

(a)   The following characteristics should be considered in order to establish aircraft types/classes with similar technical and operational characteristics:

(1)   Engine technology;

(2)   Certification basis

(3)   Level of automation;

(4)   Flight controls logic (e.g. fly-by-wire, conventional, etc.); and

AIR OPS

ED Decision 2017/006/R of 30 March 2017

AOC approval & oversight (including flight crew training approval and oversight, and FSTD user approval)

AMC	GM
AMC4 ARO.GEN.200(a)(2) Management system INSPECTOR QUALIFICATION FOR CAT OPERATIONS (a) For CAT operations of aircraft with an MOPSC of more than 19 seats or with an MCTOM of more than 45 360 kg, an inspector who performs initial certification or oversight tasks relating to: (1) the flight crew operating procedures contained in Part B (e.g. Chapters B-2, B-3, and B-9) of the Operations Manual (OM), or (2) the aircraft/FSTD part of the flight crew training syllabi and checking programmes contained in Part D of the OM, should have the following qualifications: (i) operational experience in air transport operations appropriate to the allocated tasks; (ii) experience in either operational management within an air transport operation; or as an examiner; or as an instructor; and (iii) hold or have held a valid type rating on the aircraft type concerned; or a class rating as appropriate; or a rating on	(5) Size and mass of the aircraft (e.g. maximum take-off mass, wake turbulence category, etc.). (b) The following factors should be considered with regard to knowledge of the route and area: (1) Climatological conditions, e.g. exceptionally cold weather; (2) Availability of adequate aerodromes and their specific features, e.g. high elevation, poor English/communication capability, exceptional approach procedures; (3) Navigational procedures, including PBN requirements, ETOPS and extended diversion time requirements; (4) Communication procedures, including required communication performance, any specific and contingency procedures, e.g. loss of communication, drift down, oxygen escape; and (5) Equipment requirements related to search and rescue, e.g. polar, desert operations, oceanic, remote areas. **GM7 ARO.GEN.200(a)(2) Management system** INSPECTOR EXPERIENCE IN EITHER OPERATIONAL MANAGEMENT WITHIN AN AIR TRANSPORT OPERATION OR AS AN INSTRUCTOR OR AS AN EXAMINER

AIR OPS

ED Decision 2017/006/R of 30 March 2017

AOC approval & oversight (including flight crew training approval and oversight, and FSTD user approval)

AMC	GM
aircraft types/classes with similar technical and operational characteristics. (b) For CAT operations with an MOPSC of 19 seats or less, the authority should establish the inspector qualifications required to perform the allocated initial certification and oversight tasks. The assigned inspector should undergo theoretical training on aircraft systems and operations. (c) For in-flight inspections of CAT operations, the inspector should have relevant knowledge of the route and area.	The inspector assigned to certification and oversight tasks should have sufficient experience in roles that enable a thorough understanding of the operational processes. (a) Experience in operational management refers to previous appointments in functions of organisational relevance, such as in any of the areas below: (1) flight operations and operational control; (2) flight crew training; and (3) management system Such appointments should not be limited to senior management functions such as nominated persons in accordance with point (b) of ORO.GEN.210. It is important that the inspector assigned to certification and oversight tasks in accordance with AMC4 ARO.GEN.200(a)(2) have sufficient experience which enables a thorough understanding of the operational processes within air transport operations. (b) In the context of the approval and oversight of aircraft specific flight crew training and checking, the inspector should have experience as an instructor.

4.2 Aircraft and experience clustering: a means to identify pilots with the appropriate competence

In order to identify qualified pilots with the appropriate competence, **a common understanding** needs to be established of what **'appropriate competence'** means in terms of class and type ratings or pilot qualifications and certificates. Clustering should help to establish common ground for the assessment of competence.

Clustering of aircraft ratings is normally based on the similarity of classes or types. Clustering based on similar characteristics already exists for aircraft of the same variants. As regards licence endorsement, aircraft categorisation in accordance with FCL.010 is based on operational evaluation board (OEB) reports and operational suitability data (OSD) where available. A type rating is considered valid for different variants within the same type. However, such clustering used in the context of pilot training is not an appropriate means to address inspector competence.

As regards the assessment of the specific competence of the instructors who are involved in pilot training or conducting examinations, or when reviewing the associated processes such as the training programmes or syllabi, the inspector should have the relevant competence either:

— in providing **similar type of training** (e.g. flight or ground training),
   or

— in conducting skill tests and licence proficiency checks as examiners, when assessing examiners or reviewing processes related to examinations.

Note: Examiners that hold a Part-FCL certificate, or equivalent, are deemed to have acquired the relevant experience in providing training.

In addition to the clustering of aircraft of similar characteristics, a simplified clustering of experience may be considered to provide sufficient flexibility when qualified pilots are required to act as inspectors or inspection team members. Clustering of experience helps also to assess the risks related to an inspector's profile with respect to various oversight tasks. The more limited the relevant experience, the higher the risks. The competent authority is responsible for determining how to manage these risks, i.e. whether they are within acceptable limits or if complementary measures are to be taken.

Difficulties, challenges, issues:

— Clustering is inappropriate for risk mitigation;

— Inconsistencies across Member States;

— The introduction of new aircraft types may require further subdivisions or new clusters (e.g. to adapt to new technologies, such as electric propulsion).

Enablers:

— Clusters of similar aircraft characteristics and the description of the principles used for the clustering are detailed in a dedicated annex.

— In addition to the clustering of aircraft, a simplified clustering of pilot experience is provided in the same annex so as to establish common ground for equivalence of expertise levels.

4.3　Assigning tasks to an inspection team that require a pilot

Oversight tasks may be performed either by a single inspector or by an **inspection team.** While increasing the size of an inspection team may not be appropriate for the oversight of small organisations, it is possible, however, for specific oversight tasks to appoint individual experts at different times within the same oversight cycle. Such experts would report to the inspector who has the overall responsibility for the organisation.

In this context, three scenarios may be considered when a qualified pilot acts as an inspector:

— Full allocation of all oversight tasks to a qualified pilot who is also an inspector, i.e. an inspector pilot; or

— A qualified pilot that acts as subject-matter expert in an oversight team in case of on-site inspection under the overall responsibility of an inspector; or

— A qualified pilot that acts as subject-matter expert for technical oversight tasks (e.g. off-site document review, specific approvals, focused on-site investigations) as part of a continuous monitoring process which is under the responsibility of an inspector.

Difficulties, challenges, issues:

— Competent authority's responsibilities and liabilities when assigning tasks to pilots who act as inspectors;

— Building a multiple-competence team (communication, procedures, etc.);

— Proportionality of the team size with respect to the size of the organisation to be overseen;

— Teamwork for the management of findings; and

— Ensuring oversight continuity.

Enablers:

A dedicated annex is proposed to clarify:

— the distinction between the various options to compose a team;

— clearly defined lines of responsibility of the competent authority that ensures oversight and assigns the tasks;

— the role of the inspector representing the competent authority;

— the role of the qualified pilot that acts as subject-matter expert for specific technical tasks.

4.4　Selection of pilots from a pool of experts to act as subject-matter experts

Selecting pilots from a pool of appropriately qualified experts to carry out certification and oversight tasks can compensate for the lack of required expertise and profiles available within the competent authority.

Various types of pools of experts can be considered:

— pools of NAA inspector pilots;

— pools of inspector pilots from the industry;

— combination of both.

Pools of experts could be developed as an interim solution to cope with a temporary lack of resources or could be seen as a permanent resource management support. In each case, the challenges and the issues to be addressed may be different to some extent. Common issues could be grouped together, while specific difficulties could be addressed separately.

In the context of this Guide, identifying pilots from a pool of experts is considered to be a viable option **only for temporary needs** (e.g. new aircraft type introduced, unforeseen increase of approval and oversight tasks). The case of qualified pilots that act systematically as subject-matter experts is addressed separately in Section 4.3. as part of the oversight team composition.

The long-term sharing of qualified pilots or inspector pilots is addressed in Annex 3 to this Guide (scenarios A and B). Although this sharing may be perceived as a kind of pooling of experts, in this Guide the long-term sharing of qualified pilots is linked to staffing and management system. Regardless of how subject-matter experts are shared, the competent authorities that engage them are responsible for the planning of their availability in order to ensure the proper completion of all tasks as required by the current applicable regulation (ARx.GEN.200(a)(2)).

For the sake of clarity, the concept of **pooling of experts**, **in the context of this Guide,** is **limited** to the sharing of experts for **contingency planning,** i.e. to cover unplanned activity or temporary/transitional shortage of expertise.

Note: Experts engaged by NAAs for long-term planning may well be part of a pool for contingency planning. The options proposed in this Guide are mutually compatible.

Difficulties, challenges, issues:

— Monitoring the performance of the subject-matter expert;

— Authorising the subject-matter expert to access premises (e.g. airside access), investigate, conduct interviews and collect evidence;

— Financial, contracting and administrative aspects; recurrent training in administrative procedures;

— Ability of the subject-matter expert to draft reports and record findings, as they are not necessarily very experienced in local procedures;

— The topics to be considered are: avoidance of conflict of interest; availability of profiles; sustainability (i.e. avoiding that everyone relies on the pool and no one is actually willing to recruit experts and make them available to others); language issues and recognition among Member States; business sensitivity of operators; cultural issues;

— Data protection issues;

— Different funding mechanisms of the competent authorities.

Enablers:

Annex 5 of this Guide describes the implementation of a pool of experts. It addresses in particular:

— the aspects related to the governance of the pool;

— the principles for the participation in the pool and the management of the availability of experts;

— contractual arrangements;

— the principles for establishing predefined processes to request and allocate experts (see Annexes 4 and 6);

— the prevention of potential conflict of interest;

— the conditions for ensuring confidentiality.

5   References

— Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1) (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008R0216&rid=1)

— Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1) (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011R1178&rid=1)

— Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1) (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R0965&rid=1)

— Commission Implementing Regulation (EU) No 628/2013 of 28 June 2013 on working methods of the European Aviation Safety Agency for conducting standardisation inspections and for monitoring the application of the rules of Regulation (EC) No 216/2008 of the European Parliament and of the Council and repealing Commission Regulation (EC) No 736/2006 (OJ L 179, 29.6.2013, p. 46) (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R0628&rid=1)

— ED Decision 2017/006/R of 28 March 2017 amending the Acceptable Means of Compliance and Guidance Material to Part-ARO of Regulation (EU) No 965/2012 ('AMC and GM to Part-ARO — Issue 3, Amendment 6') (https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2017006r)

— NPA 2016-16 'Regular update of Part-FCL — Regular update of Regulation (EU) No 1178/2011 regarding pilot training and licensing and the related oversight (https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2016-16)

— EASA Aviation Inspector Competencies Report — '*Proposal for a Competency Framework for the Competent Authorities' Inspectors*' (https://www.easa.europa.eu/document-library/general-publications/easa-aviation-inspector-competencies-report)

— ICAO Doc 8335 'Manual of Procedures for Operations Inspection, Certification and Continued Surveillance' (https://www.icao.int/APAC/Meetings/2012_FAOSD_Training/Doc%208335%20-%20Manual%20for%20Ops%20Inspection%20Cert%20Continued%20Surv%20Ed%205%20%20(En)%5b1%5d.pdf)

— ICAO Doc 10070 'Manual on the Competencies of Civil Aviation Safety Inspectors', First edition, 2016.

6 Abbreviations used in this Guide

A/THR	auto-thrust or auto-throttle
AMC	acceptable means compliance
AOC	air operator certificate
AP	autopilot
ARA	Annex VI to Commission Regulation (EU) No 1178/2011 (the Aircrew Regulation)
ARO	Annex II to Commission Regulation (EU) No 965/2012 (the Air Operations Regulation)
ARx	either Part-ARA or Part-ARO
ATO	approved training organisation
CAA	civil aviation authority
CAT	commercial air transport
CAT II / CAT III	Category II / Category III approaches
CS	certification specifications
DG	dangerous goods
EASA	European Aviation Safety Agency
EBT	evidence-based training
EFIS	electronic flight instrument system
ETOPS	extended-range operations with two-engined aeroplanes
EU	European Union
FCL	flight crew licensing
FD	flight director
FLT	flight
FLT CTRLs	flight controls
FMS	flight management system
FSTD	flight simulation training device
FTE	full-time equivalent
GEN	general
GM	guidance material
HEMS	helicopter emergency medical service
HHO	helicopter hoist operations
HOFO	helicopter offshore operations
ICAO	International Civil Aviation Organization
kg	kilograms
LPC	licence proficiency check
LVO	low-visibility operations
MCTOM	maximum certified take-off mass
MEL	minimum equipment list
MOPSC	maximum operational passenger seating configuration
NAA	national aviation authority
NCC	non-commercial operations with complex motor-powered aircraft

NCO	non-commercial operations with other-than-complex motor-powered aircraft
NPA	notice of proposed amendments
NVIS	night-vision imaging system
OEB	operations evaluation board
OM	operations manual
Ops	operations
ORO	Annex III to Commission Regulation (EU) No 965/2012 (the Air Operations Regulation)
OSD	operational suitability data
PBN	performance-based navigation
PPL	private pilot licence
RMT	rulemaking task
RN	requesting NAA (see definition in Annex I to this Guide)
RP	resource provider (see definition in Annex I to this Guide)
RVSM	reduced vertical separation minima
SEP	single-engine piston
SPO	specialised operations
Std	standard or standardisation (depending on the context)
Std/FTE	standard/full-time equivalent
SXA	service exchange agreement
THR	thrust or throttle
TRI	type rating instructor

Annex 1. Definitions

Definitions of terms used in this Guide:

— **Requesting NAA (RN):** the NAA that requests expertise from the pool of experts by means of a Request for Expertise, in accordance with the Terms and Conditions agreed between the RN and the Resource Provider (RP).

— **Resource Provider (RP):** the NAA or the organisation that runs a pool of experts and provides qualified pilots, to the RN, from the pool of experts in accordance with the Terms and Conditions. This includes secondment of expert pilots, to the RN, from the pool of experts in accordance with the Terms and Conditions.

— **Secondment:** the assignment of an individual employee listed in the pool of experts by an RP to perform certain technical tasks for the RN under the direct technical management of the RN.

— **Pool of Experts list:** a list which enables the sharing of sufficient information on individual experts (and their expertise) as nominated by the participating NAAs.

Annex 2.   Clustering of pilot technical competence

The clustering of similar competence should provide sufficient flexibility to manage expertise while preserving the ability of the pilots involved in oversight to efficiently perform their tasks.

The concept of clustering is used in the context of operational suitability data (OSD) and evidence-based training (EBT). While such clustering is well adapted to pilot training needs, it is too restrictive for the purpose of oversight, where the competence needed is different. Except when conducting examinations, skill tests or proficiency checks which are linked to pilot training, clustering in the context of oversight should not be restricted as long as it does not affect efficiency of oversight. The limit for the clustering is reached when further detailed categorisation of competence does not significantly improve safety while substantially increasing costs.

Based on the above considerations, the following clustering of aircraft of similar characteristics is provided to identify the typical expertise needed for a given oversight task:

Certification basis for the clustering:

AIRCRAFT	
1	CS-22 Sailplanes
2	CS-23/-25 Aeroplanes
3	CS-27/-29 Rotorcraft
4	CS-31 Balloons

Example for aeroplanes:

For CS-23/-25 Aeroplanes

POWER PLANT		NUMBER OF ENGINES		MCTOM	
1	PISTON ENGINE	1	SINGLE ENGINE	1	< 2 000 (KG)
2	JET	2	TWIN ENGINE	2	2 000 – 5 700 (KG)
3	TURBOFAN	3	THREE or more ENGINES	3	5 700 – 45 360 (KG)
4	TURBOPROP			4	45 360 – 136 000 (KG)
				5	> 136 000 (KG)

COCKPIT LAYOUT		AUTOMATION		FMS		FLT CTRLs	
1	CLASSIC	1	NO AUTOMATION	1	NO	1	FLY-BY-WIRE
2	EFIS	2	AP	2	YES	2	NON-FLY-BY-WIRE
		3	AP/FD				
		4	AP/FD and A/THR				

To further simplify and standardise the categorisation of competence, a basic clustering of experience is proposed below. It is based on 4 levels: None (N), Level A (A), Level B (B), and Level C (C). Practically, as an example for airline pilots, it could be determined as follows:
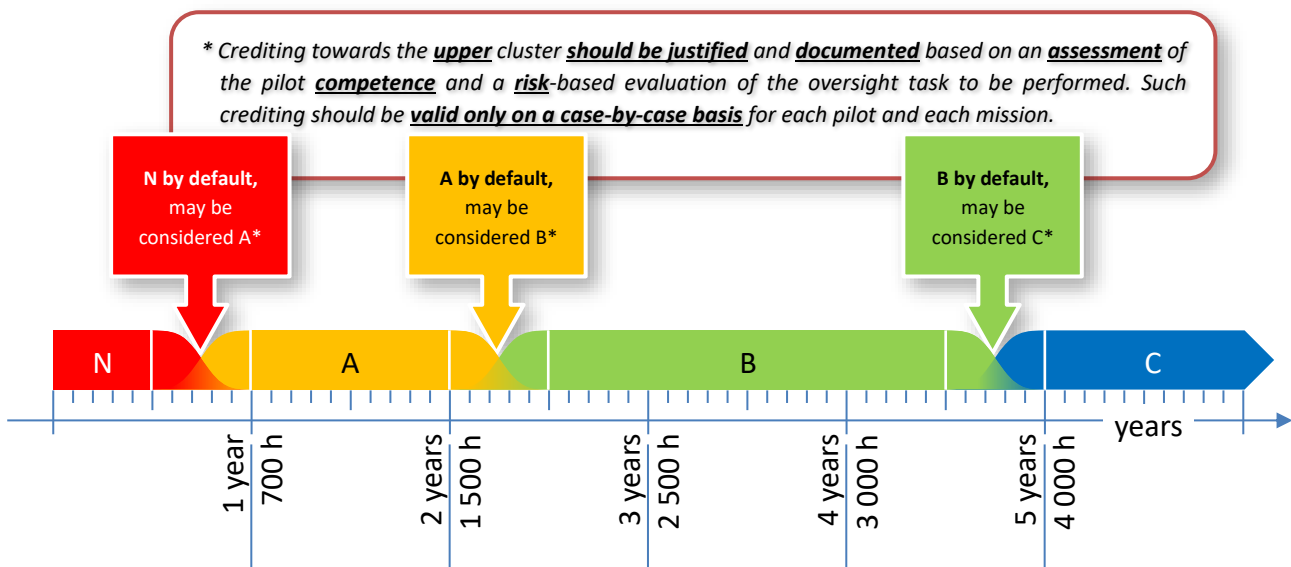
Table 1

Experience	Identifier	Minimum	Maximum
None	**N**	0	0.5 years or 400 h* on type/class
Level A	**A**	1 year or 700 h* on type/class	2 years or 1 500 h* on type/class
Level B	**B**	2.5 years or 2 000 h* on type/class	4.5 years or 3 500 h* on type/class
Level C	**C**	5 years or 4 000 h* on type/class	Unlimited

 * The number of flight hours shown in this table is only relevant for airline pilots. It is based on the assumption that the industry standard full-time equivalent (Std/FTE) is 700 h per year.

 While a full-time active airline pilot may well fly between 600 and 800 h a year on the same aircraft cluster, it is unlikely that a full-time active type rating instructor (TRI) will conduct 600 h of training in a year. In the case of an instructor, the competent authority should determine the Std/FTE based on the average yearly training activity of all the TRIs in the relevant cluster of type of aircraft who conduct training on a regular basis during the whole year.

 The concept of Std/FTE should be used by competent authorities to classify experience when the number of flight hours in the table is not relevant for the oversight activity to be performed.

The above table can be further detailed as follows:

Figure 1

The 'transition slots' in the table are systematically considered as part of the lower cluster, unless the competence of the pilot has been assessed as being satisfactory for the crediting towards the adjacent higher cluster. This should depend on the competence of the individual and the safety risks associated to the task to be performed. Such crediting should only be granted on a case-by-case basis.

To extend this table to other aircraft categories (such as rotorcraft, for example), the following process could be considered:

1. Determine the industry yearly standard full-time equivalent (Std/FTE) of the pilots employed in the target operational environment to be overseen.

    Graph 1 below illustrates this step:

Graph 1

**Activity in the target operational environment
of the industry to be overseen**
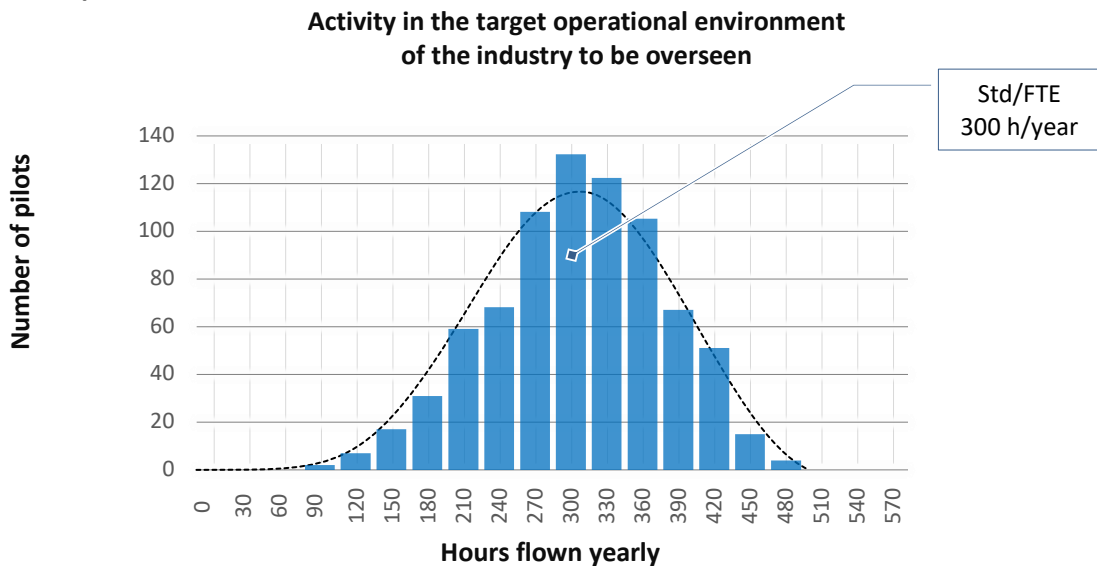
Std/FTE
300 h/year

2. If the target operational environment is new (emerging aviation sector) or small (low activity), determine the industry yearly standard full-time equivalent (Std/FTE) on the basis of other operational environments similar to the target. Similarity may be used as long as the activity of the target operational environment does not provide sufficient, statistically significant indicators. The assumption is that the risks in a new operational environment are initially comparable to the risks in similar environments. However, if this assumption does not seem to be realistic, the competent authority should determine additional risk mitigation strategies such as increasing the frequency of inspections, imposing frequent mandatory activity reporting and/or mandating data-driven monitoring of safety indicators, etc.

3. Use Table 1 and the Std/FTE determined above to convert the range of years into clusters of hours of flight experience for the pilots of the target operational environment. The following template can then be filled in accordingly:

Table 2

Experience	Minimum	Maximum
None	0	0.5 years or ………. **h** of flight experience
Level A	1 year or ………. **h** of flight experience	2 years or ………. **h** of flight experience
Level B	2.5 years or ………. **h** of flight experience	4.5 years or ………. **h** of flight experience
Level C	5 years or ………. **h** of flight experience	Unlimited

For the Std/FTE shown in Graph 1 and Table 1, the corresponding new table would be as follows:

Table 3

Experience	Minimum	Maximum
None	0	0.5 years or **200 h** of flight experience
Level A	1 year or **300 h** of flight experience	2 years or **700 h** of flight experience
Level B	2.5 years or **800 h** of flight experience	4.5 years or **1 400 h** of flight experience
Level C	5 years or **1 500 h** of flight experience	Unlimited

4. Check that the resulting table is consistent with the industry standards for the recruitment of experienced pilots in the relevant operational environment. This can be based on the job vacancies published or advertised by the organisations of the relevant industry segment.

5. It is important to link the flight time to the number of years of experience so as to determine the relevance of the experience. The number of years alone does not mean much without sufficient operational experience in terms of flight hours (or actual time spent in conducting the relevant operational activity).

If needed, for specific operational needs, the same process can be applied to other activity indicators. The example below shows an activity indicator based on the number of CAT II or CAT III approaches performed by pilots operating in an all-weather operational environment of a fictitious aviation industry sector.
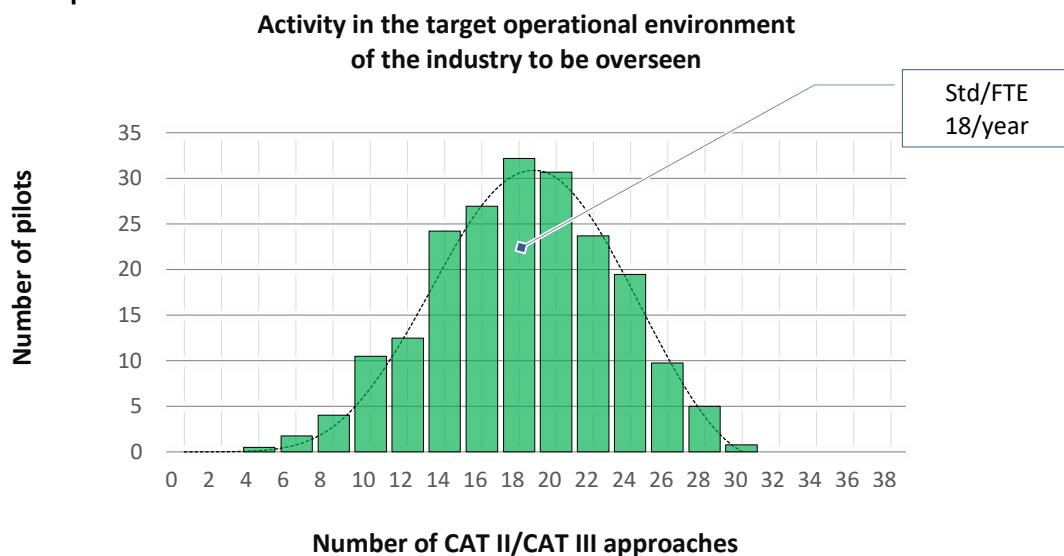
Graph 2

Activity in the target operational environment
of the industry to be overseen

Std/FTE
18/year

Number of pilots

Number of CAT II/CAT III approaches

Table 4

Experience	Minimum	Maximum
None	0	0.5 years or **10 approaches**
Level A	1 year or **20 approaches**	2 years or **40 approaches**
Level B	2.5 years or **50 approaches**	4.5 years or **85 approaches**
Level C	5 years or **95 approaches**	Unlimited

The combined use of aircraft and experience clustering is illustrated below:
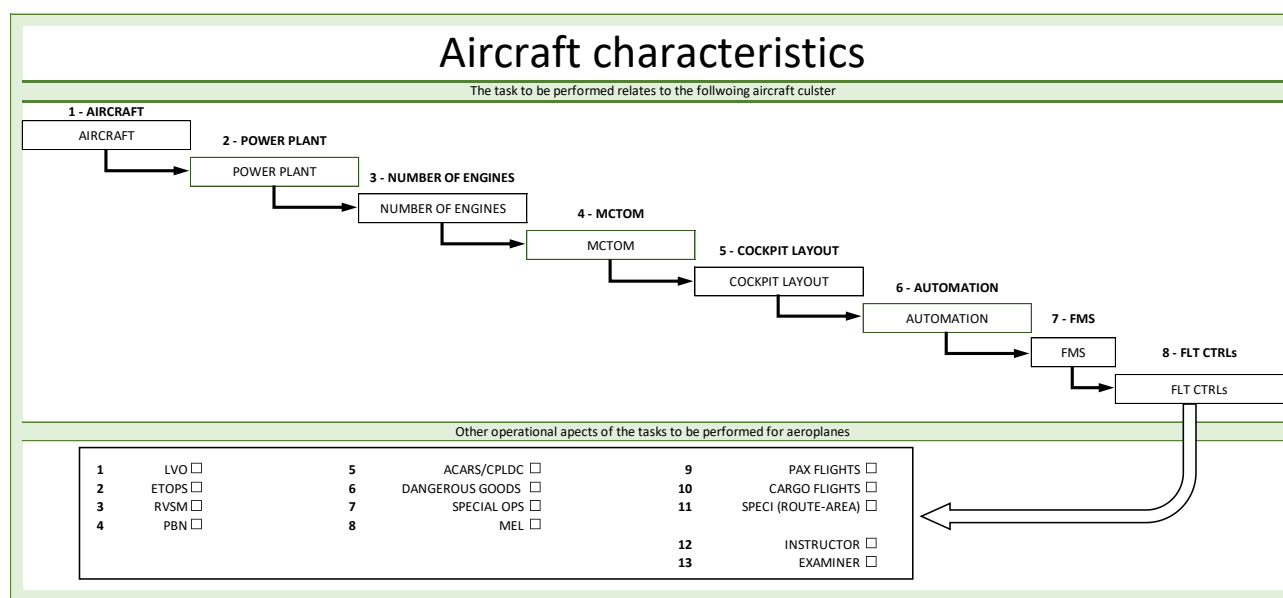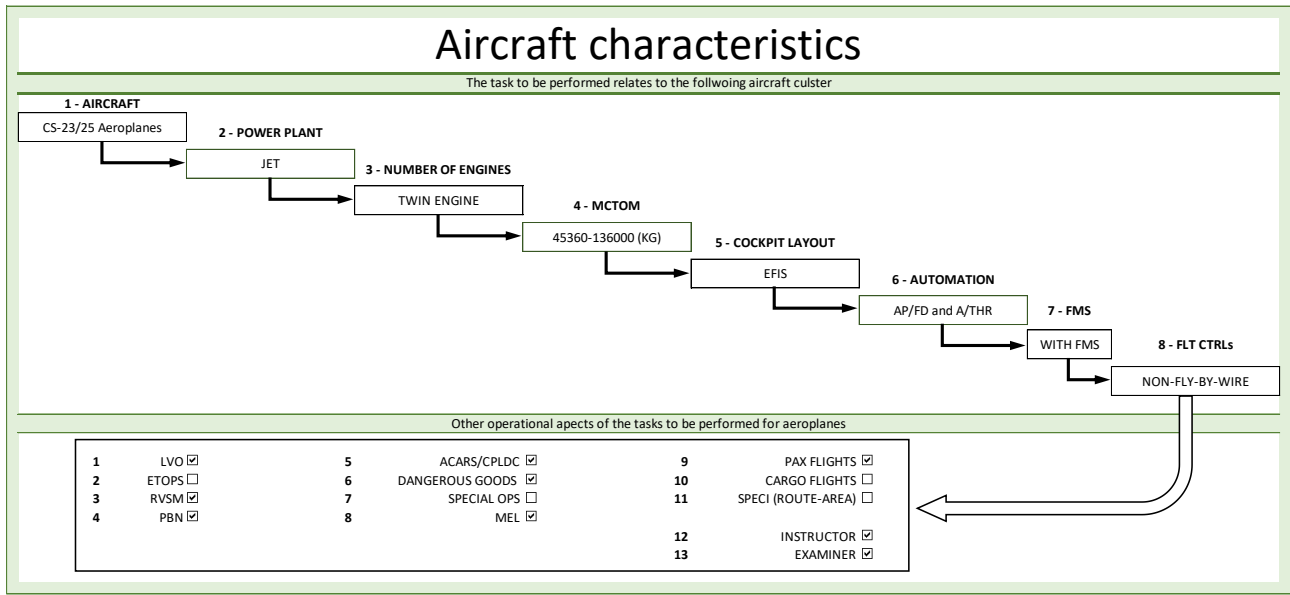

Table for aircraft characteristics and additional competence clustering (for aeroplanes, in this case; similar clustering is possible for other aircraft).

Table for experience clustering (for aeroplanes, in this example; similar clustering is possible for other aircraft).

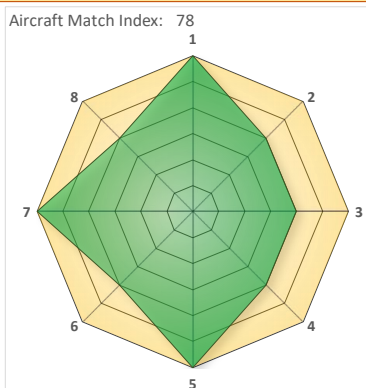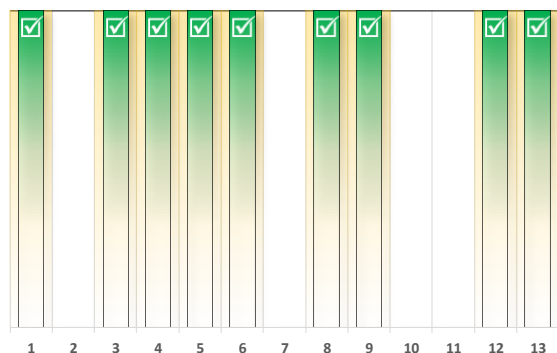*An example of how the clustering table can be used is shown below:*

Aircraft characteristics

The task to be performed relates to the follwoing aircraft culster

Step	Box
1 - AIRCRAFT	CS-23/25 Aeroplanes
2 - POWER PLANT	JET
3 - NUMBER OF ENGINES	TWIN ENGINE
4 - MCTOM	45360-136000 (KG)
5 - COCKPIT LAYOUT	EFIS
6 - AUTOMATION	AP/FD and A/THR
7 - FMS	WITH FMS
8 - FLT CTRLs	NON-FLY-BY-WIRE

Other operational aspects of the tasks to be performed for aeroplanes

1	LVO	☑	5	ACARS/CPLDC	☑	9	PAX FLIGHTS	☑
2	ETOPS	☐	6	DANGEROUS GOODS	☑	10	CARGO FLIGHTS	☐
3	RVSM	☑	7	SPECIAL OPS	☐	11	SPECI (ROUTE-AREA)	☐
4	PBN	☑	8	MEL	☑			
						12	INSTRUCTOR	☑
						13	EXAMINER	☑

Pilot experience Gregg Glass

1 - AIRCRAFT	2 - POWER PLANT	3 - NUMBER OF ENGINES	4 - MCTOM	5 - COCKPIT LAYOUT	6 - AUTOMATION	7 - FMS	8 - FLT CTRLs
CS-23/25 Aeroplanes	JET	TWIN ENGINE	45360-136000 (KG)	EFIS	AP/FD and A/THR	WITH FMS	NON-FLY-BY-WIRE
C - Level	B - Level	B - Level	B - Level	C - Level	B - Level	C - Level	B - Level

1	LVO	Y	5	ACARS/CPLDC	Y	9	PAX FLIGHTS	Y
2			6	DANGEROUS GOODS	Y	10		
3	RVSM	Y	7			11		
4	PBN	Y	8	MEL	Y			
						12	INSTRUCTOR	Y
						13	EXAMINER	Y

Aircraft Match Index: 78

Gregg Glass

Other operational aspects: acceptable profile

Annex 3. Team composition, roles and responsibilities

An inspection may be performed either by a single inspector or by a team composed of an inspector and subject-matter experts. It is important to distinguish the roles in each case. In this Annex, the following three scenarios are addressed:

A. A qualified inspector pilot is assigned;

B. A qualified pilot acting as subject-matter expert is part of the team;

C. A pilot from a pool of experts is designated as part of the team.

In the context of this Guide, the following applies:

A. A qualified inspector pilot with the appropriate competence:

— is a person empowered by the competent authority to complete the assigned oversight tasks;

— represents the competent authority regardless of who is paying or employing them;

— is fully responsible for the oversight tasks performed.

Qualified inspector pilots may either be:

— employed by the competent authority that is responsible for the oversight task;

— employed by a different competent authority from the one responsible for the oversight task, provided that they have received the training needed to work for the competent authority that is responsible for the oversight and that has assigned them the oversight task;

— from the aviation industry, provided that they have received the training needed to work for the competent authority that is responsible for the oversight and that has assigned them the oversight task.

Optimising the use of resources:
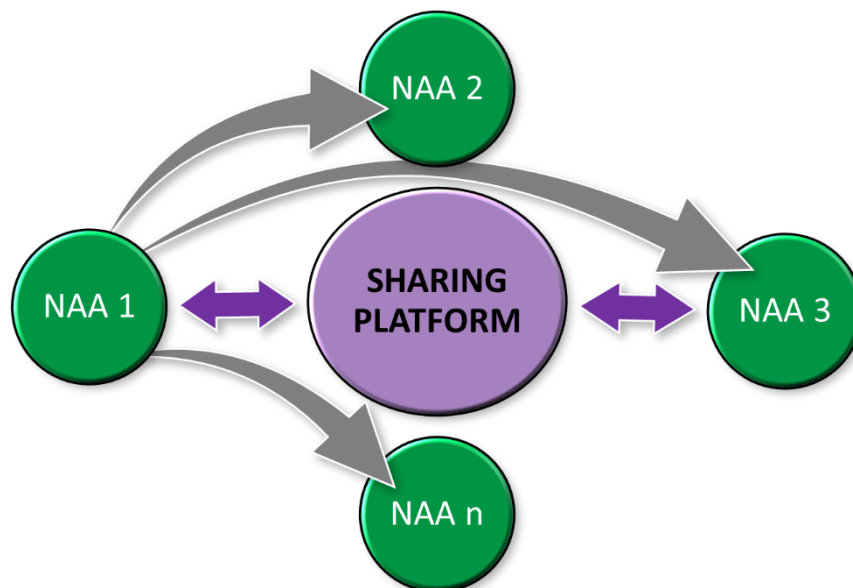
Two options may be considered for the sharing of **inspector pilots:**

1. Experts can be shared on the basis of a bilateral sharing agreement between two NAAs.

    Depending on the management system of the two NAAs involved, inspector pilots may be seconded against a financial compensation or according to a service exchange agreement (SXA). The SXA would require the NAA receiving support to provide back to the NAA offering support equivalent service free of charge.

    Bilateral sharing of experts is convenient when:

    — the requesting NAA (RN) is aware of the resources available in the NAA acting as resource provider (RP);

    — an agreement among the NAAs exists or is easy to establish;

    — the planning for the availability of the resources can be easily managed.

2. A sharing platform accessible to more than two NAAs enables any NAA to request a subject-matter expert who may be available in any other NAA that is willing to provide such an expert. Such a wider sharing platform would simply work as a specialised communication platform. In its simplest configuration, the platform could be an IT tool collecting the requests for experts entered by NAAs, thus enabling the NAAs with available resources to provide the requested expertise. The main objective of the sharing platform would be to facilitate communication so as to optimise the use of experts among competent authorities across Member States.

    Inspector pilots may be provided against a financial compensation or according to a general or an ad hoc service exchange agreement.

    Such a sharing platform would require participating competent authorities to:

    — agree on establishing and managing the sharing platform, including bearing the related costs;

    — agree on the processes to request and second;

    — agree on dedicating time and resources to provide the expertise requested;

    — accept some flexibility to enable service exchange when financial compensation is not possible or inadequate.

    It doesn't matter whether the sharing of **inspector pilots** is concluded directly between two NAAs or through a sharing platform — the system can only work if all stakeholders are willing to consider global optimisation as a priority. The challenge is that as a result of the sharing agreements in place, each NAA may systematically reduce its resources so that for the system as a whole all qualified pilots are fully occupied at all times. Such planning strategy does not provide any extra margin for contingencies and may easily lead to understaffing. It is always difficult to swiftly adjust the number of permanently employed experts to short-term oversight needs. Therefore, while attempting to 'optimise' its own resources, each NAA may more and more rely on the experts from other NAAs and further reduce its staff. While this may work for a short period of time, in the long run the sharing of experts may simply become impossible as all NAAs will be requesting qualified pilots while no NAA would be able to provide any.

    A similar reasoning applies when experts from the industry are shared. In other words, the concept of sharing implies availability of resources. Availability means extra capacity. Therefore, all stakeholders involved in the sharing are expected to coordinate their staffing strategies globally. This will ensure global optimisation by reallocating resources so that no expert is underused and that the costs are shared based on the level of support received. Of course, availability means also planning of activity.

An expert involved in some tasks is not available until these tasks are finished. This means that collaborative planning, ensuring that experts are used in an optimal way, is also part of the collaborative process implied by the sharing of experts.

Global strategic planning can be illustrated as shown below:

Graph 3
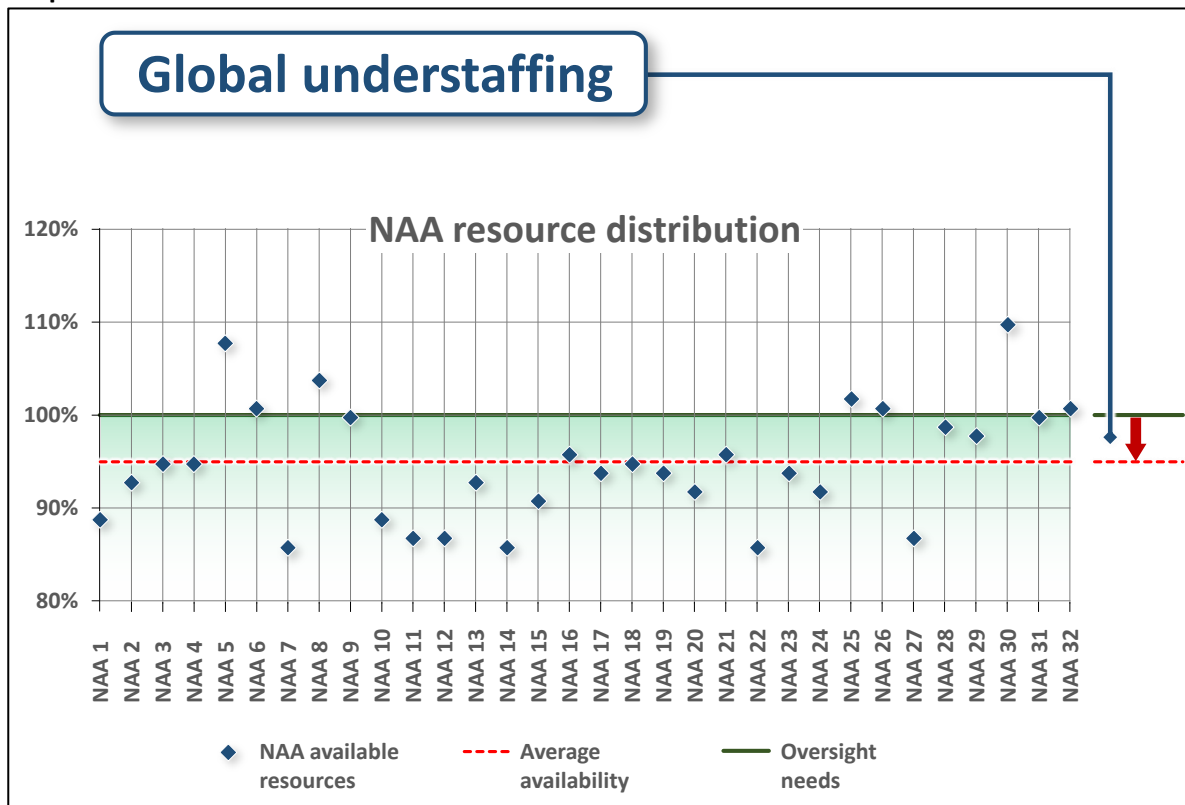
When the resources available in most NAAs are below the staffing required for their oversight activities (Graph 3), global understaffing prevents any sharing of qualified pilots from fulfilling the global needs for oversight. The best possible sharing of available resources would simply reduce the staffing gaps among the NAAs. This would bring their staffing levels closer to the average level of available resources which would still remain below the global staffing level required to ensure proper oversight. This situation may result from uncoordinated staffing strategies where understaffed NAAs rely on external resources from other NAAs. It may seem to each individual NAA that its staffing strategy is effective. However, it is not certain that an NAA will find the required resources when it needs them. For example (Graph 3), NAA 3 may consider that the additional resources available in NAA 5 are sufficient to meet its needs. In fact, this may well be the case. However, many other understaffed NAAs will probably make the same assumption. In this case, no sharing system will ensure that the additional resources available in NAA 5 will meet the needs of all the understaffed NAAs that rely on it.

Graph 4

Graph 4 — Global satisfactory staffing / NAA resource distribution
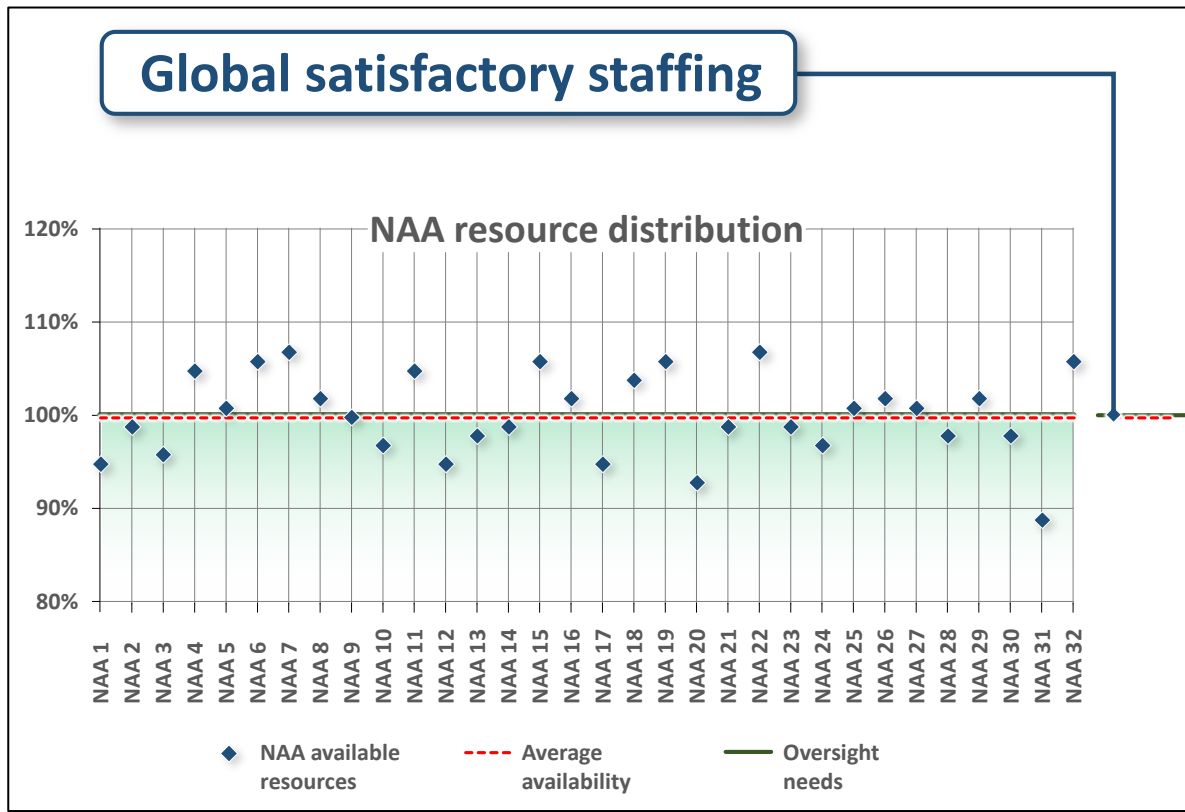
Global staffing strategies based on collaborative planning ensure that the sharing of resources meets the global needs (Graph 4). Although some NAAs may be understaffed, the average availability of resources is globally satisfactory. An efficient sharing of available resources would ensure an even distribution of the available staff so that no expert is underused. This would also mean that the extra staffing costs sustained by the NAAs that provide the resources to the sharing platform would be recovered from the other NAAs using them. The risk that these costs will not be recovered needs to be properly mitigated to avoid global understaffing as previously discussed.

Graph 5
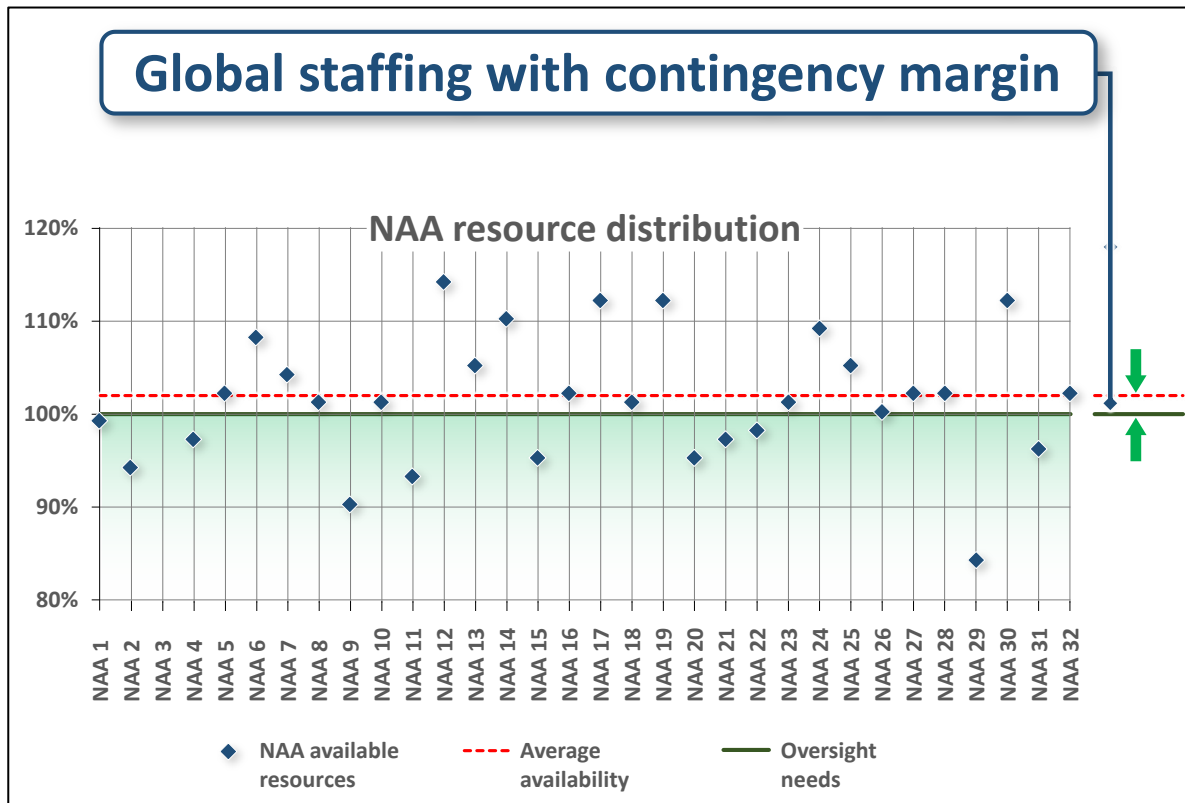
Optimum global staffing strategies should address contingency planning. In terms of staffing, no predictive system is perfect. Consequently, planning for oversight introduces some uncertainty and risk of understaffing. Such risk should be mitigated. This means that planning for contingencies should be an integral part of the global staffing strategy. The staffing margin for oversight contingencies is easier to mitigate by sharing resources. This ensures that all NAAs contribute to the risk mitigation in a consistent manner. The sharing of resources works like an insurance system where all contributors share the global cost of an accident that no single stakeholder would be able to afford. A 2 % average contingency margin provided by 32 NAAs ensures a total capacity to address 64 % of the staffing needs for an average NAA[13] (Graph 5). Even if the extra capacity is not fully used, no single NAA will face alone this risk. This ensures optimal use of resources, and it can be much more challenging if the 32 staffing strategies are not coordinated.

In-depth analysis of collaborative staffing strategies is outside the scope of this Guide as it is not specific to pilots acting as inspectors. The considerations discussed above are simply indicative of the various aspects that should be addressed when it comes to optimising the use of resources.

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[13]   An average NAA is an NAA that has average oversight needs, i.e. 1/32 of the total of the 32 NAAs' oversight needs.

B. A qualified pilot acting as subject-matter expert for a specific oversight task or participating in an inspection team:

— is an expert authorised and empowered by the competent authority to complete specific technical tasks where such competence is required;

— is part of an oversight team led by an inspector who has the final responsibility as assigned by the competent authority that exercises oversight;

— is only responsible for the assigned technical matters and reports to the inspector.

As shown below, a qualified pilot for technical tasks may be either:

— a pilot (e.g. senior examiner) who is regularly or occasionally engaged by the competent authority, provided that they have received the appropriate training and/or information in order to complete the assigned technical task; or

— a pilot (e.g. airline pilot or a pilot working for an approved training organisation (ATO) who can be directly hired by the competent authority, provided that they have received the appropriate training and/or information in order to complete the assigned technical task.

Optimising the use of resources:

The use of external resources, such as **qualified pilots** from the aviation industry, either regularly or occasionally, needs to be planned to some extent. The risk that the required resources are not available when needed should be mitigated. This is a kind of resource sharing, as explained above. Relying on resources from external providers, either NAAs or industry, means that there is a risk that both parties need the same resources at the same time. There should be a process in place to plan the distribution of the workload. The assumptions made on the availability of resources and the dependence on external expertise need to be carefully assessed and the risk of understaffing should be mitigated. When coordinated staffing strategies are unrealistic, more conservative contingency staffing margins are needed.

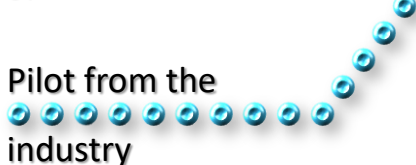Pilot from a group of qualified pilots regularly engaged;

or

Pilot from a group of qualified pilots occasionally engaged;
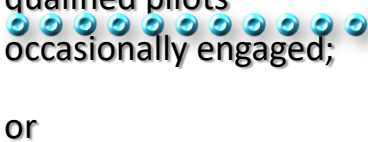
or

Pilot from the industry

and INSPECTOR FROM CA

QUALIFIED TEAM

C. A pilot identified from a pool of experts:

— is part of a group of qualified pilots (either qualified as inspectors or not), from which competent authorities can designate experts for contingency planning;

— is always part of a team representing the competent authority, and the team is led by an inspector who acts on behalf of the competent authority that exercises oversight;

— is only responsible for the assigned technical matters and reports to the inspector.

Pilots from a pool of experts may be either:

— qualified inspectors from NAAs or the industry (acting only as experts, not as inspectors); or

— qualified pilots from industry selected by NAAs; or

— qualified pilots or inspectors from EASA (acting only as experts, not as inspectors).

When an inspection is conducted as described in the scenarios in A, B and C above, the management system of the competent authority that exercises oversight and assigns the task to the individual or the team shall consider and record at least the following:

Scenario described above	Documented processes, evidence and records
A. Inspector pilot with the appropriate competence	1. Agreement to allow the engagement of 'external inspector'; 2. Duties and responsibilities; 3. Initial and recurrent training; 4. Training that can be credited when the inspector works for more than one competent authority or for the industry; 5. Conflict of interest; 6. Confidentiality.
B. Qualified pilot acting as subject-matter expert	1. Agreement to engage 'external expert pilots'; 2. Duties and responsibilities; 3. Training or information required to complete the assigned task; 4. Task card; 5. Conflict of interest; 6. Confidentiality.
C. Pilot identified from a pool of experts	See Annex 5 'Selection of pilots from a pool of experts to act as subject-matter experts'

Where the RN that is responsible for a particular task engages an expert seconded by another party to assist in that task, the liability remains with the RN, as does the technical management function which includes oversight of the task and ensures that the work is carried out properly in accordance with the RN's standards and procedures.

Allocation of technical tasks to a pilot from a pool of expert does not discharge the NAA from its responsibility as a competent authority exercising oversight.

Annex 4. Methods of requests for expertise

The process to be established for the involvement of qualified pilots from a pool of experts should be linked to the governance of the pool of experts. Depending on the roles and responsibilities of the stakeholders contributing to the sustainability of the pool of experts, different processes for the involvement of the experts may be considered.

In this Guide, the involvement of qualified pilots from a **pool of experts** is only considered in the context of **temporary oversight needs.** When experts are involved in long-term or systematic oversight activities, they are considered to be part of the oversight team as described in the relevant parts of this Guide.

Since existing EASA–NAA framework service contracts do not govern the relationships among the NAAs, inter-NAA arrangements could be established in the form of a Pool of Experts Terms and Conditions document which would be based on the agreed EASA–NAA framework service contracts. These Terms and Conditions would be implemented through duly signed Service Agreement Forms.

The pool of experts can then become a means of providing transparency as regards availability of experts among the NAAs for the purposes of certification tasks and related expertise, with the potential to widen the scope at a later stage.

In this Guide, only the request to involve an expert listed in the pool of experts in a project carried out under the direct technical management of the RN is considered.

Requests for support are made only through the focal points nominated by each party and are implemented by individual Requests for Expertise/Service Agreements. Individual Service Agreements will be agreed and signed by both parties that implement the Pool of Experts Terms and Conditions. Any exclusions or variations with regard to the Terms and Conditions will need to be specified in the Request for Expertise/Service Agreement.

RNs decide independently whether requests for expertise for a particular task are made to one or more potential RPs.

RNs decide independently whether to accept offers for support; there is no prescribed formal process governing the selection of resources, and there is no obligation to accept offers made by one or more potential RPs.

Requests or offers for support are not recorded or statistically analysed under the pool of experts concept, unless this is commonly agreed beforehand by all parties.

Annex 5. Selection of pilots from a pool of experts to act as subject-matter experts

Participation in the pool of experts is currently open to EASA Member States.

The participation of NAAs in the pool of experts is voluntary. EASA's role is to establish and administer the pool of experts.

The pool of experts facilitates the efficient use of the expertise of certification experts by the NAAs.

Persons listed in the pool of experts by one party work actively in their field of competence at their employer and can, in principle and depending upon availability, be seconded to another party to support a certification task or a related service.

It is left to the discretion of the RP (the employer of a person listed in the pool of experts) to accept a request for secondment to another party.

The provision of services of the pool of experts is described in the Terms and Conditions based on the pool of experts already developed.

In the context of the revision of Regulation (EC) No 216/2008, EASA may be tasked to further develop regulatory proposals and implement action plans which are outside the scope of this Guide.

Annex 6.   Example template for contractual aspects of a pool of experts agreement

Article 1
Services

1.   The national aviation authority (NAA) in the role of Resource Provider (RP) will contribute to the execution of the Requesting NAA's (RN) tasks by providing secondment of experts on a case-by-case basis for specific tasks.

2.   The services shall be provided in accordance with the standards and procedures of the RN.

Article 2
Third-party liability

1.   The RP shall not be liable for any special damages or for any indirect or consequential losses or expenses (including loss of contracts, savings, business or goodwill) that are incurred by the RN as a result of the services provided howsoever they are caused and even if it was aware of the possibility of those to occur when it entered into a Service Agreement under these Terms and Conditions.

2.   The RN agrees to waive any claim it may have against the RP-provided staff in connection with their performance in the execution of a task and as a result of their negligence, acts or omissions. This is without prejudice to any claim the RN may have against the RP itself in accordance with these Terms and Conditions.

3.   The RN shall provide assistance to or cooperate with the RP in order to protect itself and its experts in the event of court action against any of them in relation to the execution of their tasks under these Terms and Conditions and vice versa.

4.   The RN shall indemnify the RP, its members and experts against any actions or claims brought against them by any third party in connection with the services provided under a Service Agreement and against any liabilities, including any legal costs, any damages and any expenses arising from or incurred due to or in connection with such actions or claims, except and to the extent that the actions or claims are brought as a result of the negligence of the RP, its members or its provided staff.

Article 3
Charges and reimbursements

1.   The RP shall be compensated for the services provided by its experts at the costs as specified in the signed Service Agreement.

2.   The RN shall reimburse or directly pay for the travel and accommodation expenses that arise from work performed under the Service Agreement in accordance with the RP's charging principles as specified in the Service Agreement.

Article 4
Applicable law and settlement of disputes

1. A Service Agreement concluded in accordance with these Terms and Conditions shall be deemed to have been made in the English language and shall be governed by the national substantive law of the RN.

2. Any disputes among the parties in connection with any matter arising under a particular Service Agreement, which cannot be settled amicably or through arbitration, shall be brought before the courts of the RN.

Article 5
Data protection

Any personal data retained in the pool of experts list shall be processed pursuant to Regulation (EC) No 45/2001 and Regulation (EU) 2016/679 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data. Personal data shall be processed solely for the purposes of the functioning, management and follow-up of the pool of experts. The data subjects shall have the right to access their personal data and the right to rectify any such data that is inaccurate or incomplete. Should the data subjects have any queries concerning the processing of their personal data, they shall address them to the European Aviation Safety Agency. The data subject shall have the right of recourse at any time to the European Data Protection Supervisor.

Article 6
Signatory powers

1. The inspector from the RP may possess the same signatory powers as a member of the RN for issuing the related certification/approval documentation, subject to the national laws of the RN.

2. The subject-matter expert from the RP shall not have the same signatory powers as an inspector from the RN has, but shall sign to confirm that the agreed tasks have been completed in accordance with the standards and procedures of the RN. The RN, upon acceptance of the completed tasks, is responsible for signing and issuing the related certification/approval documentation.

Article 7
Performance of service agreements

1. The parties shall perform the tasks to the highest professional standards and in accordance with these Terms and Conditions, and as specified in the related Service Agreements.

2. The RN shall take the necessary steps to assist the RP's seconded personnel to obtain any permit or licence required in order to perform the oversight tasks under the laws and regulations in force at the place where the tasks assigned to them are to be performed.

3. The RP shall ensure that its experts allocated to the RN in accordance with these Terms and Conditions and under related specific Service Agreements have the professional qualifications and experience required for the execution of the tasks assigned to them.

4. The RP shall have sole employment responsibility for its experts that are seconded to the RN. The RN shall not under any circumstances be considered to be the employer of the RP's experts.

Article 8
Conflict of interest

1. The RN shall take all necessary measures to prevent or end any situation that could compromise the impartial and objective performance of these Terms and Conditions and/or the Service Agreement. Such a conflict of interest could be in particular the result of economic interest, political or national affinity, family or emotional ties, or any other relevant connection or shared interest. Any conflict of interest which could arise during the performance of these Terms and Conditions and/or the Service Agreement must be notified to the RP in writing without delay.

The RN reserves the right to verify that such measures are adequate and may require additional measures to be taken if necessary. The RP shall ensure that its experts are not placed in a situation which could give rise to conflict of interest.

2. Each RP shall abstain from any contact which is likely to compromise its independence.

3. The parties that sign a Service Agreement in accordance with these Terms and Conditions shall ensure that all the relevant obligations are known to the involved staff.

Article 9
Ownership of the results — intellectual and industrial property

Any results or rights thereto, including copyright and other intellectual or industrial property rights, that are obtained by the RP's personnel when performing a particular oversight task are hereby assigned to the RN which may use, publish, assign or transfer them as it sees fit, without geographical or other limitation, except where industrial or intellectual property rights already exist.

Article 10
Confidentiality

Subject to applicable national law, the RP undertakes to treat in the strictest confidence and not make use of or divulge to third parties any information or documents which are linked to the performance of a Service Agreement. The RP shall continue to be bound by this obligation after completion of the tasks.